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# Spaceport News

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John F. Kennedy Space Center



The STS-108 crew leads the way to the Astrovan for a ride to Launch Pad 39B for a simulated launch countdown. They are followed by the Expedition 4 crew. From front to back, left and right, are Pilot Mark Kelly and Commander Dominic Gorie; Mission Specialists Daniel Tani and Linda Godwin; Expedition 4 Commander Yuri Onufrienko; astronauts Daniel W. Bursch and Carl E. Walz. The simulated countdown is part of Terminal Countdown Demonstration Test activities, which have also included emergency exit training from the orbiter. Launch of Space Shuttle Endeavour on mission STS-108 is scheduled for Nov. 29.

## STS-108 mission 1st utilization flight

Mission STS-108, the 12th Space Shuttle flight to the International Space Station (ISS), was set at press time to launch Nov. 29.

The 11-day mission is the first Utilization Flight (UF1) of the Station program. The main objective of this mission is to transfer hardware into the ISS and perform the third ISS crew rotation.

Several payloads and the Expedition 4 crew members will make the journey to the Station aboard Shuttle Endeavour. Expedition 4's three crew members will stay on the Station for approximately five months.

After serving on the Station for nearly four months, Expedition 3 crew members Frank Culbertson, Vladimir Dezhurov and Mikhail Tyurin, will return to Earth aboard Endeavour.

One spacewalk is planned for this mission to perform preventive

maintenance on the Beta Gimbal Assembly of one of the solar wings. These assemblies are used to adjust the angle of the wings as they track the sun.

The Station's solar arrays, with a span of 240 feet, make the ISS the most electrically powerful spacecraft ever to orbit the Earth.

The Raffaello Multi-Purpose Logistics Module (MPLM), carried in the orbiter's payload bay, will deliver to the ISS experiments and hardware for use by the Expedition Four crew.

Nearly 6,000 American flags will be carried aboard Endeavour. The "Flags for Heroes and Families" campaign honors victims, survivors, and relief workers associated with the Sept. 11 terrorist attacks on the U.S. The families of victims and survivors will receive these flags and a memorial certificate when the Endeavour crew returns.

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## New NASA Administrator nominated

President George W. Bush announced Nov. 14 he was nominating Sean O'Keefe, deputy director of the Office of Management and Budget (OMB), as NASA's new administrator.

With the President's nomination and anticipated confirmation, O'Keefe will succeed Administrator Daniel Goldin, who resigned after nearly ten years as the agency's chief.

NASA Associate Deputy Administrator Daniel Mulville is expected to head day to day operations until the new administrator is confirmed.

"I would like to offer my congratulations to Sean as he begins

the nomination process to become NASA's next administrator. I look forward to assisting in the transition of my leadership of America's space program," Goldin said. "I feel blessed to have had the unique opportunity to serve the people of this Nation in an area so tied to the hopes and dreams of all Americans."

Prior to his appointment at OMB, O'Keefe was the Louis A. Bantle professor of business and government policy, an endowed chair, at the Syracuse University Maxwell school of citizenship and public affairs.

He also served as the Director of National Security Studies, a

partnership of Syracuse University and Johns Hopkins University for delivery of executive education programs for senior military and civilian Department of Defense managers.

Appointed to these positions in 1996, he was previously professor of business administration and assistant to the senior vice president for research and dean of the graduate school at the Pennsylvania State University.

In 1992, he was appointed as the secretary of the Navy by President George H.W. Bush, and in 1989, served as comptroller and chief

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# Recognizing Our People

## 5 Senior Executives win Meritorious Executive awards

Five NASA/KSC Senior Executives were recently awarded the prestigious Meritorious Executive Presidential rank award.

The award is presented each year to a small group of career Senior Executives within the Federal government who demonstrate strength in leadership and a personal commitment to excellence in public service.

KSC senior executives honored include Roy Bridges Jr., Center Director; David King, Director, Shuttle Processing Directorate; John “Tip” Talone Jr., Director, ISS/Payload

Processing Directorate; James Hattaway Jr., Director, Procurement Office; and Larry Ellis, Acting Deputy Director, ISS/Payload Processing Directorate.

The recipients were nominated by former NASA Administrator Dan Goldin.

Their nominations were reviewed and evaluated by a panel of private citizens and approved by President George Bush.

The award is presented to only 5 percent of career Senior Executive Service (SES) members each year.

Goldin notified the honorees of their selection in September.



The award-winning NOx Scrubber invention was developed by, from left, Dr. Clyde Parrish, senior chemist, NASA; Paul Gamble, chemist, Dynacs Engineering; Dr. Dale Lueck, senior chemist, NASA; Andrew Kelly, hypergolic systems engineer, NASA. Not pictured is Melanie Chan, technology transfer manager.

## NOx Scrubber wins regional award

The Kennedy Space Center technology, “A New Process and Equipment for Conversion of NOx Scrubber Liquor to Fertilizer,” has been selected to receive the Southeast Federal Laboratory Consortium’s Excellence in Technology Transfer Award.

Award recipients include the inventors and technology transfer

manager.

The regional awards are given to selected Federal laboratories in the Southeast to recognize hard work, selfless devotion to the pursuit of excellence, and dedication to improving the American way of life.

The awards will be presented at the SE-FLC regional meeting in Orlando Jan. 15.

# Harris, Billow honored by National Space Club

The National Space Club Florida Committee presented the Harry Kolcum Memorial News and Communications Award to Hugh Harris and Dan Billow at their monthly luncheon meeting Nov. 15.

The ceremony was held at the DoubleTree Oceanfront Hotel in Cocoa Beach.

Harris formerly headed NASA public affairs at Kennedy Space Center before retiring in 1998 after 35 years of service with NASA.

“I really appreciate being honored with this award. Like many other awards, it is the result of the fine work of thousands of others,” Harris said, thanking the NASA and contractor team, members of the media and naming others specifically, including his wife Cora.

Called “The Voice of NASA” for many years by the world’s television networks, Harris is best known



Hugh Harris is pictured with his Harry Kolcum Memorial News and Communications Award.

to the public for his calm, professional commentary on the progress of launch preparations and launch of the Space Shuttle.

His primary accomplishments at KSC were in directing an outreach program to the general public, news media, students and educators, as well as business and government leaders.

Harris also oversaw the largest major expansion in the history of the Kennedy Space Center Visitor Complex, which hosts more than 3 million visitors a year.

Harris began his career as a member of the news media.

Since his retirement in 1998, he has shared his NASA experience and lessons learned with nuclear industry leaders through conferences held by the United Nations’ International Atomic Energy Agency in Europe and Japan, and in this country through the Nuclear Energy Institute.

He also has been consulting in the fields of contingency planning,

business management and public relations.

The Cocoa Beach resident is presently serving on the Board of Directors of the NASA Alumni League.

Television journalist Dan Billow moved to WESH-TV in Orlando in 1987 and has been in the Cape Canaveral Bureau ever since, covering all space launches and other stories.

Billow received a Central Florida Press Club award for investigative reporting in 1991 and a regional Emmy award for coverage of Hurricane Erin in 1996.

His most recent special project was a half-hour documentary report in January 2001 on the sounds and images of the Space Shuttle final inspection, after equipping the Final Inspection Team for the first time with a camera and microphone.





From left, Mike Knievel, director of the Volusia County Public Libraries, Kathryn Robinson, director of the Orange County Library System, Center Director Roy Bridges, Catherine Schweinsberg, director of Brevard County Libraries, and Pam Biegert, NASA chief of the Education Programs and University Research Division.

# KSC donates books to area libraries

Library directors from Brevard, Orange and Volusia Counties gathered in the Education Resource Center at the Center for Space Education at Kennedy Space Center Visitor Center Nov. 6 for a special reason.

Center Director Roy Bridges and Pam Biegert, chief of the Education Programs and University Research Division at KSC, were on hand to present each of them a collection of aerospace and science books to help update their libraries.

The books were awarded as part of NASA's Partnering Librarians And NASA (PLAN) program. The PLAN program goal is to help libraries update the information they have regarding NASA's Space Program, science and technology.

The Center for Space Education used a \$25,000 grant from NASA to purchase more than 30 books for each of the 50 libraries in the three represented counties.

"As more students use the library system to do their research

for classes, we felt it was important that the libraries be knowledgeable of NASA's programs and have up-to-date materials for their use," Biegert said.

"We are very excited to be receiving these books that will fulfill so many needs for our patrons and especially those students who have an interest in space exploration and our space program," said Catherine Schweinsberg, director of Brevard County Libraries.

According to Steve Dutczak, lead for K-12 Education Services at the Center for Space Education, the PLAN program evolved from a similar education workshop for teachers that has been in place at KSC for more than 40 years.

Directors and librarians from the three counties' libraries were invited to attend five-day workshops during the summer of 2000.

At the seminars, the librarians were provided with useful information and materials about KSC and

NASA. They took this information back to their libraries and used the materials as exhibits for the general public.

When the grant money became available, the librarians who attended these seminars were canvassed as to what aerospace books were needed to update the libraries.

Some of the titles include, *The History of NASA*, *John Glenn's Return to Space*, *NASA Space Vehicles: Capsules, Shuttles and Space Stations*, *The International Space Station* and *Into the Final Frontier: A History of Manned Spaceflight*.

"The partnership between Orange County Library System and the Kennedy Space Center, consisting of a one-week training program for librarians and the donation of library materials, has enriched library programs and has enhanced our ability to make science accessible and interesting to children and young adults," said

Kathryn Robinson, director of the Orange County Library System.

"The education workshop was one of the best I've experienced. The generosity of the staff and their accessibility and knowledge was an overwhelming contribution to our library system," said Mike Knievel, director of the Volusia County Public Library. "Families moving into Volusia County are looking for quality schools and education. The contribution of these aerospace and science books is outstanding."

Biegert added, "Educating the librarians through this program has proven to be very beneficial in our education and outreach efforts and they have become great assets in providing resources to the students and public."

Director Bridges, during the presentation said, "Educating the future engineers, scientists and leaders of tomorrow is a big part of our job. We need to find other good ideas like this."



# Inside MILA



Facilities craftsman Doug Johnson checks a diesel engine that drives the generator that supplies power to MILA during critical activities.



Above, Dave Swartz, front, and Keith Ashworth switch gear equipment that controls commercial power and power from MILA's generators.



Dave Swartz, left, and Abe Cicchetti, both facilities craftsmen, plan maintenance work on the 9-meter antenna in the background. The antenna is MILA's workhorse that communicates with the Space Shuttle Orbiter during launch, in low-Earth orbit and during landing.



From left, Melissa Blizzard, MILA operations manager, John Evans, station manager, and Keith Ashworth, who monitors and controls MILA systems.

**T**he MILA Spaceflight Tracking and Data Network Station contributes greatly to Kennedy Space Center and other NASA centers by tracking the Space Shuttle through radio transmissions during the first seven and one-half minutes of launch. Millions of clues about the performance of the Shuttle's main engines and other components are communicated to launch managers and engineers on the ground who

must keep their fingers on the pulse of the Shuttle during the critical ascent period. The station also serves as the data and voice communication link between the Shuttle and the ground during launch. And MILA is sometimes called up to provide data transfer support for Expendable Launch Vehicle launches. In addition to providing launch support, the tracking station assists KSC, Johnson Space Center

and Jet Propulsion Laboratory in making sure that communication systems on orbiters, Space Station elements and spacecraft payloads receive and transmit information correctly through their antennas before launch. MILA gets its name from the acronym derived from the Merritt Island Launch Annex to Cape Canaveral, now called KSC. Although MILA supports KSC, it actually is a Goddard Space Flight

Center operation. Goddard originally established the tracking station in 1966 at KSC as a part of a global ground-based data network that provided orbital support to the Apollo program. MILA no longer provides much orbital tracking support because of the creation of the Tracking and Data Relay Satellite constellation. The Ponce DeLeon Inlet Tracking Annex at Ponce Inlet in New Smyrna Beach was added to MILA



# Inside MILA



Electronics technician Bill Jaynes reviews Data Quality Monitoring of the received and transmitted data.



Electronics technician John Webber controls movement of the 9-meter antenna.



From front, right to left, John Webber, Jim Voss and Preston Saunders patch data to KSC and the Range Operations Control Center.



Liz Parish, logistics specialist, controls the Kardex Industriver Supply System.

Evans, station manager, and Don Childs, operations supervisor, are pictured at the workstations

to track the Shuttle during the second and third minutes of flight when the plume of the Shuttle's solid rocket boosters impede radio transmissions to MILA.

NASA Station Director Tony Ippolito and 54 Consolidated Space Operations Contract employees make up the MILA team. Technicians are employed by GHG, operations supervisors by Honeywell Technical Solutions Inc., logistics employees by BAE

Systems and security, safety and environment supervisors by Lockheed-Martin.

"Our operation is out away from the KSC processing areas, so sometimes we don't come to mind when workers are thinking about all the operational areas on Center," Ippolito said. "Although we are Goddard employees, we take great pride in the support we give to KSC and other NASA centers."

Last year MILA passed 10,400

hours of data between spacecrafts and data users.

When MILA receives information, it relays the data through KSC to Goddard. Goddard then relays the information to JSC, JPL and other centers when needed.

Equipment and software upgrades continue to ensure the reliability of the operation's data collection and transfer.

Because the data that it receives and transmits is so vital, MILA has

its own set of 250- and 500-kilowatt generators that go into action before launch to ensure that the power supply to the operations remains uninterrupted. MILA's systems are tested and retested between flights to ensure that they are 100 percent reliable.

"We can't afford to have any significant equipment fluctuations that could produce bad data," Ippolito said. "Too much is at stake."



# KSC home page new and improved

Kennedy Space Center’s public home page has wrapped up an extensive redesign that will provide a more visitor friendly interface while making it easier to locate information.

The new site premiered Nov. 15. Visitor input was a driving factor in the look and functionality of the new design.

Since May 2000, the last time the site underwent a design change, hundreds of comments were submitted via an online survey form. Patterns began to emerge and KSC Web managers designed the new home page using these suggestions as a guide.

The result is an organized, compact page that serves as a portal to other parts of the site. The primary links are arrayed around a large round graphic that changes each time the page is reloaded.

Upcoming launch and landing information is provided at a glance in the upper left corner. With about a third fewer links, there is more

*“We’ve had teams of subject-matter experts and Web developers working on this new design and layout for more than nine months. Our new pages load quickly, navigation is greatly improved, and we have added some great new content and functionality. We appreciate the time that so many of our site visitors took to tell us what they thought.”*

**DENNIS ARMSTRONG,**  
KSC PUBLIC WEB SITE MANAGER

room for a larger font and additional news content.

Information contained on the site was divided into several categories, all of which have their own new portal pages created to match the new home page design scheme. Like the home page, each of these new pages has a prominent navigation bar, informative link

descriptions and colorful graphics.

“We’ve had teams of subject-matter experts and Web developers working on this new design and layout for more than nine months,” said Dennis Armstrong, KSC’s public Web site manager. “Our new pages load quickly, navigation is greatly improved, and we have added some great new content and

functionality. We appreciate the time that so many of our site visitors took to tell us what they thought.”

KSC is also introducing a new multimedia gallery, through which the Center’s extensive still photo archives can be searched by a wide variety of methods. Web managers hope to add the capability to search for video and audio files in the future.

The Kennedy Space Center Web site, launched in 1993, has traditionally focused on KSC-specific information such as Space Shuttle missions, Space Station processing, and expendable launch vehicles.

Recently, however, several new links to other online NASA resources have also been added. In the first five months of 2001, the KSC Web site received more than 200 million hits and three million unique visitors.

The KSC home page is located at <http://www.ksc.nasa.gov>.

## NEW ... (Continued from Page 1)

financial officer of the Department of Defense for then Defense Secretary Dick Cheney.

Before joining the Defense Department, he served on the United States Senate Committee on Appropriations staff for eight years, and was staff director of the Defense Appropriations Subcommittee.

O’Keefe’s public service began in 1978 after he was selected as a Presidential Management Intern.

He is a fellow of the National Academy of Public Administration and has served as chair of an academy panel on investigative practices.

O’Keefe was a Visiting Scholar at the Wolfson College of the

University of Cambridge in England and a member of the Naval Postgraduate School’s civil-military relations seminar team for emerging democracies and has conducted seminars for the Strategic Studies Group at Oxford University.

He served on the national security panel to devise the 1988 Republican platform and was a member of the 1985 Kennedy School of Government program for national security executives at Harvard University.

In 1993, President Bush and Secretary Cheney presented him the Distinguished Public Service Award. He was also the recipient of the Department of the Navy’s Public Service Award in December 2000. In 1999, he was a faculty recipient of the Syracuse University Chancellor’s Award for Public Service.

## USA contract modified

NASA recently negotiated two modifications to the Space Flight Operations Contract with United Space Alliance, adjusting costs, resolving open issues related to work done last year and providing for a variety of tasks planned during 2002. Together, the modifications have a total value of \$189 million.

The first modification bundles several different credits and costs incurred in the Space Flight Operations Contract during fiscal year 2001 and results in a net increase to the contract value of \$95 million. The largest task involved and the majority of incurred costs are related to work on Space Shuttle Columbia as part of a maintenance period that was completed earlier this year.

The second modification enhances the fiscal year 2002 Program Provisioning Task List, providing sustaining engineering for the Space Shuttle Program, adding \$94 million to the contract value.

The program-provisioning tasks involve work on the Shuttle orbiters, ground operations, program integration, program reimbursables, flight operations and solid rocket boosters.

Work under the two modifications will be performed in Houston; Huntington Beach, Calif.; Palmdale, Calif.; Huntsville, Ala.; and at the Kennedy Space Center.





The Advanced Technology Development (ATDC) Team take a walkdown at the ATDC site, which is located at Space Launch Complex 20 at Cape Canaveral Air Force Station. The design phase of the first phase of construction is complete and construction planning has begun.

# ATDC to enhance technology development

The Advanced Technology Development Center (ATDC) being created at Space Launch Complex 20 at Cape Canaveral Air Force Station is expected to help take spaceport technology research and development at Kennedy Space Center to a new level of integration and excellence.

Like the Space Experiment Research and Processing Laboratory now being built to enhance Life Sciences research and payload preparation, the ATDC will strengthen KSC’s abilities as a Spaceport Technology Center, said Greg Clements, NASAATDC project manager.

The ATDC will serve as a magnet to draw new government, commercial and academic partners to Kennedy Space Center for spaceport technology development.

“We will be able to better support the Shuttle program as well as new reusable launch vehicle

programs,” Clements said. “In addition we will be able to act as a proving ground for states interested in developing their own spaceport.”

The ATDC will enhance the capabilities of KSC’s other Spaceport Engineering and Technology Directorate research labs by providing a development and testing complex that parallels the environment of operational launch pads, said Suzy Cunningham, senior spaceport manager for the project.

“The ATDC program will be a great addition to to the Cape Canaveral Spaceport’s capabilities. It will be the first facility where customers can perform full-scale, integrated testing in a near-launch environment,” Cunningham said.

More comprehensive testing of cryogenic systems, intelligent automated umbilicals, integrated vehicle health management

systems, next-generation safety systems and advance range technologies will be possible.

“The new testing environment will allow spaceport technology equipment and process development improvements to advance more quickly and efficiently,” Clements said. “It will also give program managers a greater assurance that the equipment or process will work as planned when deployed operationally.”

Clements’ ATDC project team hosted a walkdown of the ATDC site at Cape Canaveral Air Force Station Nov. 9 to formally recognize the completion of the Phase 1 design and the beginning of construction preparation.

Phase 1 construction is planned for completion in the summer with the goal of beginning the ATDC’s first major operational usage – an acceptance test for a new liquid oxygen pump for the Shuttle –

*“The new testing environment will allow spaceport technology equipment and process development improvements to advance more quickly and efficiently.”*

**GREG CLEMENTS**  
ATDC PROJECT MANAGER

before the end of FY02.

Major ATDC facilities being planned will include a Liquid Oxygen Area (Phase 1); a Liquid Hydrogen Area, a Liquid Nitrogen Area, and a multipurpose Launch Mount (Phase 2); “Iron Rocket” Test Demonstrator (Phase 3); a Processing Facility with a Checkout and Control System (Phase 4); and Future Infrastructure Developments (Phase 5).





Earth Science oceanography satellite Jason 1 is processed for launch from Vandenberg Air Force Base, Calif.

# Jason 1/TIMED launch set Dec. 7

The launch of the Jason 1, NASA’s latest Earth Science oceanography satellite, and TIMED, NASA’s Thermosphere, Ionosphere, Mesosphere, Energetics and Dynamics space science satellite, was scheduled at press time for launch Dec. 7, from Vandenberg Air Force Base, Calif.

Jason 1 is a joint U.S./French oceanography mission. The spacecraft will build on the heritage of the Topex/Poseidon satellite in observing global climate interactions between the sea and the atmosphere.

Jason 1 will monitor world ocean circulation, study interactions of the oceans and atmosphere, improve climate predictions and observe events like El Nino.

NASA’s TIMED mission will study a mysterious region in our atmosphere called the Mesosphere, Lower Thermosphere/Ionosphere, or “MLTI.”

Located about 40-110 miles above the Earth, the MLTI is one of the last frontiers for atmospheric exploration.

During its two-year mission, TIMED will study the basic structure of the MLTI, its chemistry and the flow of energy to and from this layer of the atmosphere.

Scientists will analyze how the MLTI region affects, and is changed by, the lower atmosphere; how it influences the space near Earth occupied by low-Earth orbiting satellites; and how events on the Sun affect the MLTI.



The first four Shuttle astronauts share a moment of nostalgia at the Kennedy Space Center Visitor Complex. Pictured from left are Richard Truly, Frederick “Rick” Hauck, Robert Crippen and Joe Engle.

# Astronauts inducted into the Hall of Fame

The first four Space Shuttle astronauts were inducted into the U.S. Astronaut Hall of Fame on Nov 10 at the Kennedy Space Center Visitor.

The four honorees, Robert Crippen, Joe Engle, Frederick “Rick” Hauck and Richard Truly discussed their experiences in the space program with the media on Nov. 9. All expressed pride in having served in the program.

“It is a truly humbling experience to have been chosen for this honor,” Crippen said.

Crippen, who formerly served as KSC Director, became a NASA astronaut in September 1969. He served as pilot on STS-1 and was the spacecraft commander on STS-7, STS-41C and STS-41G

Like Truly, Crippen was a member

of the astronaut support crew for the Skylab 2, 3 and 4 missions, and served in this same capacity for the Apollo-Soyuz Test Project.

Engle was commander of one of the two crews that flew the Shuttle approach and landing test flights from June through October 1977.

Engle and Truly flew the first flight of the Space Shuttle in the orbital configuration. Engle was spacecraft commander on STS-2 and STS-51-L.

Truly was the pilot on the STS-2 flight, and commander for STS-8.

Hauck was pilot for STS-7, serving with Crippen, and spacecraft commander for STS 51-A.

Hauck also served as spacecraft commander of Discovery on STS-26, the first flight to be flown after the Challenger accident.



John F. Kennedy Space Center

## Spaceport News

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